

## THE EVENING WORLD'S RADIO PHONE SERVICE COLUMN.

By Capt. Robt. Scofield Wood

U. S. Navy, formerly Commander 16th  
Squadron, Royal Air Force.

### NEW NAVAL RADIO EQUIPMENT.

New radio equipment will soon be issued to many naval ships and craft, it was learned today, out of savings effected by the Bureau of Engineering and the engineering operation of the fleet. The new equipment includes 100-watt "A. C." tube, sets of navy model T. M. for submarines, increasing their range from three to five miles. At shore radio stations new improvements amounting to \$150,000 have been instituted. Anacostia will, under this program of improvement, get a new specially built high voltage generator for development of radio, a 2.5-kw. 3,000-cycle oscillator has also been ordered for sound-research work, and the installation of a powerful radio phone transmitting set at Arlington has been completed.

### RADIO WINS IN COMMUNICATION ECONOMY TEST.

A recent test conducted by Shipping Board representatives at San Francisco to determine the more efficient and economical method of handling communication between points, handed the honors to radio. After a two weeks' trial with similar messages sent between San Francisco and Los Angeles, San Diego, Portland, Seattle and Tacoma, the average time elapsed between filing messages at Shipping Board offices and the receipt of same by addressees for wired lines averaged thirty-seven minutes, whereas the average was only thirty-three minutes via commercial radio circuits. The traffic costs were between 40 and 50 per cent less using radio communication, with the result that most of the coastwise traffic is now being given to the radio circuit, although some difficulty may be encountered with summer static conditions. Conditions on the West Coast are far more favorable for regular all year round radio traffic than the Gulf or Atlantic Coast, because of the comparative absence of heavy static conditions.

### 800 BROADCASTING STATIONS.

Twenty-six new broadcasting stations licensed during the past week in 18 different States bring the total stations broadcasting news and entertainment up to 300. Five of the new stations are located in California, which leads the list with a total of 59 stations. Ohio is second with 23, Pennsylvania has 20 and New York 18. Texas is no longer the "Lone Star" State, according to the map of broadcasting stations at the Department of Commerce, as Maryland, Utah, North and South Dakota, each show a single star indicating but one radio station.

To-day every State except New Hampshire, South Carolina, Delaware, Mississippi, Kentucky, Wyoming and Idaho have one or more broadcasting stations.

Although the prospective bill to give the Secretary of Commerce more control over radio transmission stations has not yet been introduced in Congress, work is progressing and it is still felt that the measure will be passed this session. Little opposition is expected, as all but seven States are directly interested and support is guaranteed by amateurs, newspapers and all radio interests. This week's list includes five new paper broadcasters, bringing the total to 43 publishing houses releasing news and entertainment through the ether.

### RADIO DEBATES.

A radio debate was offered to the radio public on Tuesday last by WJH of Washington for the first time in the history of wireless. This is the latest addition to the large and varied list of radio attractions enjoyed by the fast increasing inhabitants of the "invisible empire." Messrs. C. J. Kephart and E. T. Rhodes of the National Law School took opposing sides on the popular subject of "daylight saving," with the radio fans as judges.

### MOVIES BY RADIO.

If the prediction of E. L. Eastman, the director of KVV, the popular Chicago station, means anything, the movie industry is headed for the rocks. Radio concerts have kept millions of people all over the country from the moving picture houses, and there has been no real competition in their own line—but.

Radio engineers are now working on the projection of movies by radio. Pictures have been sent by wire and engineers claim that anything that can be done by wire can also be accomplished by radio. If this is successful movie houses will join the league which Mr. Volstead organized for the saloons and rapidly become things of the past, and there will be no room for movie bootleggers in the new thing.

If radio continues to cut into things in the future the way it has up to the present time will become the most popular place for spending the evening, and if radio can be induced to carry some of the "stuff" that makes Cuba so popular at the present time nothing more will be asked of it.

### HELP APPEAL BY RADIO.

The time-honored custom of associating radio help appeals with marine disasters is fast coming to an end. In the recent floods of the Mississippi Valley, in which telephone and telegraph lines were torn away or otherwise disabled, the radio sets, both telegraphic

and telephonic, kept up the intelligence and progress of the floods that would otherwise be unknown to the general public for weeks.

In one instance radio brought relief to the city of Beardstown, Ill., which was caught when the Illinois River overflowed its banks and broke the levee and inundated all parts of the city, causing great hardships and property damage. A relief committee used the land lines, sending telegrams to all parts of the country, asking for relief, until the lines were put out of commission by the water. They then turned to the radio and broadcast an appeal which was relayed by the amateur radio relay system to all parts of the United States. And no section, no matter how remote, was uninformed of the suffering in Beardstown after the newspaper printed the radio messages, and more help was offered than could be accepted.

### EARTH BOUND?

Scientists have been experimenting since the beginning of time to get in touch with the other planets of the solar system. They have tried everything from high-power projectiles up and down the scale, and have for the past few years been experimenting with wireless waves as the latest vehicle to attain direct communication with the stars. Every once in a while some super-sensitive radio instrument registers a vibration so feeble and of such great length that they believe it originates on a planet that is trying to communicate with "Old Mother Earth." Right in the middle of a highly "oscillating" question as to the origin of a wave of tremendous length recently recorded by the Marconi Experimental Laboratories, Prof. J. A. Fleming of the University of London, one of the leading scientists of the present age and the inventor of the Fleming valve, says: "The possibility of interplanetary radio communication is far distant. An electrified dust screen thrown off by the sun keeps the radio waves down to earth, while lack of such a screen around the moon makes that satellite unfit for long-distance radio communication."

### QUESTIONS AND ANSWERS.

K. H. W., Brooklyn—"What kind of wire must I use in making a two slide tuning coil, 12 inches long and three inches in diameter? Is galena the best kind of crystal? If not, what is? Is a two wire aerial 50 feet long as good or better than a single wire 90 feet long? Can I make a ground connection on a lead water pipe instead of an iron one? How long is a meter? Answer: For your tuning coil get No. 24 enameled copper wire. After winding the coil scrape off the enamel in the path of the slider so that it can make a perfect contact. This can be done with a piece of "00" sand paper, the bare path should not be much wider than the slider. Galena is the most popular crystal in use at present. The characteristic of each piece of crystal can only be determined by actual test. Some pieces are more sensitive than others, and it is often possible to get a piece of silicon that will give better results than galena. No. The single wire 90 feet long will give far better results. Yes, the lead pipe will make just as good a ground as the iron pipe. A meter measures approximately 39.37 inches.

Emma Seabert, City—"What is the difference between a 'hard' and a 'soft' tube? How can one distinguish between them by their looks? Answer: A hard tube is one that has been highly evacuated while the vacuum chamber of the soft tube has only been partially exhausted of air. One can only tell from the maker's mark which is which.

129 Fans—"Who is the manufacturer of the tube which was so interestingly described in your column on May 8? The tube which only takes 1 1/2 volts on the filament. Where can it be bought? Answer: The tube described is made by Westinghouse and cannot be bought except for replacement purposes at present.

Fuzzled—"I have one of those U. S. L. batteries that were made for the

navy and disposed of here lately by many radio supply stores. I purchased a recharging outfit, but no matter how long I run the recharger my hydrometer reading will not show more than 1.250. Should I not read 1.300 when fully charged? Answer: To start with, you are using a six-volt home charger on an eight-volt battery, and secondly, your battery is fully charged as you will see by reading the plate on the front of the battery case. These batteries are fully charged when the hydrometer shows 1.215.

H. Hall—"Will you tell me the natural wave length of a four-wire aerial 150 feet long with a lead in 60 feet long and a ground 40 feet long? Answer: Natural wave period is about 410 metres.

X—"Will the audible signals of a set be diminished by the addition of a second set of phones? Answer: No. Look as many pairs up in series as you like.

A. R. M.—"Can I put a variable condenser in series with my aerial to complete the same results as a loading coil in getting Fort Wood at 1,450 meters? Answer: No. The condenser will have just the reverse effect and will shorten your wave length.

Radio Ray—"I lined my cabinet with sheets of thin copper to reduce the capacity effect and now I can't hear a thing. I have been all over my connections, aerial, ground and batteries, but she just won't work. What is the trouble? Answer: Did you make the fatal mistake of not cutting the copper sufficiently around the binding posts and holes through which wires are drawn so that there is no possibility of them touching the lining? If not, you have just short-circuited the set. You had better take the copper out and recut the holes so that there is no possibility of any binding posts or wires touching it. This, I think, will cure your trouble.

J. B. C.—"Can I build a regenerative

HAVING LIVED THROUGH  
FIVE DAYS IN  
SOLITARY CONFINEMENT  
in the HELL of CELL 64  
of the Convict Ship

J. J. McNamara

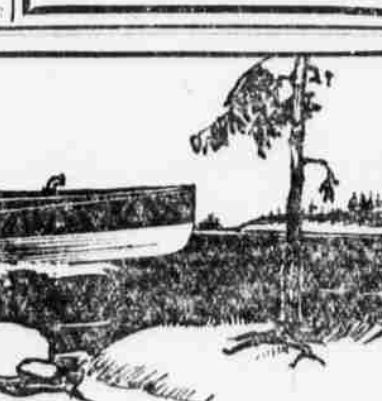
former industrial leader, recently  
discharged from San Quentin Prison,  
where he served ten years for com-  
plicity in the Los Angeles dynamite  
case.

Is Now Describing His Prison  
Experiences to Visitors on



Old Australian  
CONVICT  
SHIP

NOW at the BATTERY  
The Oldest Ship in the  
World and Too Full of  
Features to List.  
Open from 10 A. M. to 11 P. M.  
Electrically Lighted Throughout



"Manatoana"  
The Thousand Islands

"Manatoana," "The Garden of the Great Spirit," the Indians called this expanse of wide river and treed islands. Now as when Champlain first visited it, its beauty makes good that poetic name.

Though steamers and motor-boats ply its waters, the picturesque canoe persists, and bass, pickerel and the giant muscullonge give as fine sport as ever. There are campsites, cottage colonies, and hotels to suit the most varied tastes.

Interesting trips can be made through the rapids of the St. Lawrence to Montreal and Quebec.

Get our descriptive booklet at Consolidated Ticket Offices or Grand Central Terminal, or write Travel Bureau, Room 1256, 466 Lexington Avenue, New York.

Tickets on sale from  
May 15 to Sept. 30  
Corresponding fares to  
other points

NEW YORK CENTRAL

W J Z (Newark)  
360 Metres.

Features for the day:  
Agricultural reports at 12 M. and 6 P. M.  
Arlington time signals at 12.55 to 1 P. M. and 10.55 to 11 P. M.  
Baseball scores from 2 P. M. to 8 P. M.

Music every hour from 11 A. M. to 6 P. M.  
Shipping news at 2.05 P. M. and 6 P. M.  
Weather reports at 11 A. M., 1 P. M., 6 P. M. and 11.01 P. M.  
6 P. M.—"Review of the Iron and Steel Industries and Their Relation to General Business Conditions," by the Iron Age.  
7 P. M.—"Animal Stories," by Florence Smith Vincent, New York Evening Telegram.  
8 P. M.—Literary Period, conducted by editorial staff of the Outlook, Scientific American and Harper & Bros.  
9.30 P. M.—Joint recital. Inez Barbour, soprano, and Henry Kimball Hadley, composer, pianist. The programme will be announced by radio.

5.30 P. M. and at 15 minutes intervals thereafter, baseball scores.  
7 P. M.—Baseball scores, news, weekly report from the Iron Age.  
7.46 P. M.—Government market reports, and a report of the New York Stock Exchange.  
8 P. M.—Baseball scores, "Value of Classics," by Miss Florence A. Ruff, Pennsylvania College for Women; "Democracy," by Dr. J. P. Biddle, University of Pittsburgh.  
8.30 P. M.—How Arthur Won the Sword, Excelsior, a bedtime story for the children.  
9 P. M.—Music.  
10 P. M.—Baseball scores.  
10.55 P. M.—Arlington time signals.

will be announced by radio.

THE EVENING WORLD RADIO CLUB.  
Application for Membership.

Name .....  
PRINTED—SURNAME FIRST.  
Address .....  
STREET, TOWN, STATE.  
Receiving Set .....  
Broadcasting Set .....  
Type ..... Location .....  
Call Letters ..... Date .....

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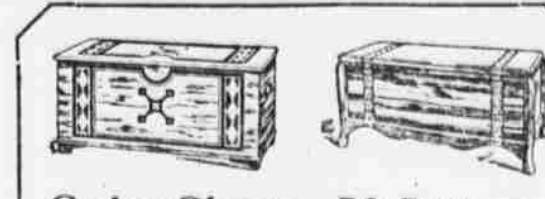
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## These Spear Bargains for 4 Days Only!

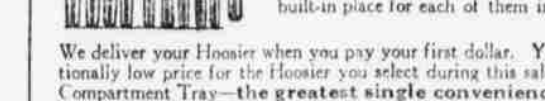
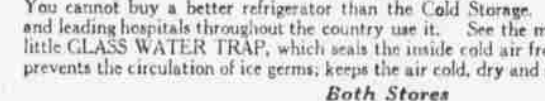
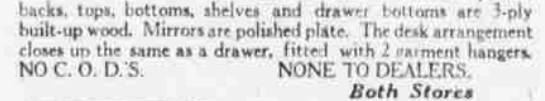
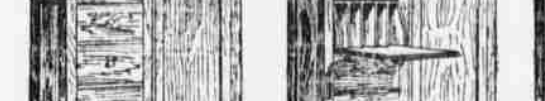


Cedar Chests—50 Patterns

All sizes, 36 to 48 inch. Various period designs, including chests finished in Walnut and Mahogany. Spear Cedar Chests, made of mountain grown, fragrant Tennessee cedar, are guaranteed mothproof and should not be confused with worthless "boxes." Exclusive features include locked air-tight corners.

Guaranteed Lowest-in-the-City Prices

Both Stores



20% Cash delivers any of them to your home—except Hoosier Kitchen Cabinets, delivered on payment of One Dollar.

SPEAR SAYS: Buy any of this merchandise—have it delivered to your home—then shop around, and if your purchase is obtainable elsewhere at a lower price we will make good the difference—that's how sure Spear is that his values cannot be duplicated.

Guaranteed Lowest-in-the-City Prices

Both Stores

Summer Rugs at Guaranteed Lowest-in-the-City Prices

Both Stores

Wool Fibre Rugs

9x12 ft. \$17.35  
8x10 ft. 15.75  
7x9 ft. 12.75  
6x9 ft. 10.50

Fibre Rugs

9x12 ft. \$13.25  
8x10 ft. 12.50  
6x7 ft. 3.25  
27x54 in. 1.75

Grass Rugs

9x12 ft. \$6.95  
8x10 ft. 5.95  
6x9 ft. 3.95  
4x7 ft. 2.45  
3x6 ft. 1.35  
27x54 in. .95

Both Stores

Bargains in Cold Storage Refrigerators

On Sale in New York Exclusively at Spear's. See it demonstrated

Here Tomorrow

You cannot buy a better refrigerator than the Cold Storage. The U. S. Government and leading hospitals throughout the country use it. See the models distinguished by a little GLASS WATER TRAP, which seals the inside cold air from the outside warm air; prevents the circulation of ice germs; keeps the air cold, dry and pure.

Both Stores

HOOSIER Kitchen Cabinets

as low as \$55.75

\$100 delivers Your HOOSIER

Free Offer to June Brides

With Purchases This Week of Hoosier Kitchen Cabinets

FREE! Tool set—ten pieces, all of the best Carbon Tool Steel; Six knives, two kitchen forks and two spatulas, with compartment tray.

FREE! 9 and 14-piece Crystal Glass Container Sets, depending upon model selected, with Aluminum tops, as illustrated, for foods and spices. There is a built-in place for each of them in The New Hoosier.

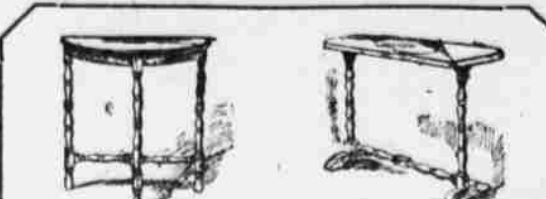
We deliver your Hoosier when you pay your first dollar. You pay the balance a little at a time. You pay an exceptionally low price for the Hoosier you select during this sale, and we give FREE the Kitchen Set and Special Tool Compartment Tray—the greatest single convenience ever installed in a kitchen cabinet.

There is no kitchen convenience that can compare with the Hoosier. Demonstration Costs You Nothing. Be sure to see the new apartment style Hoosier also included in this Special Offer.

Both Stores

Wonderful Values

On Sale at 16th Street Store Only.



End Tables

At Unusually Low Prices

Your Choice of these Davenport End Tables or combination Davenport End Table and Book Rack. All made of solid Walnut, finished in Antique Brown, with five-ply veneer Mahogany tops.

EXTRA SPECIAL \$6.95

Both Stores

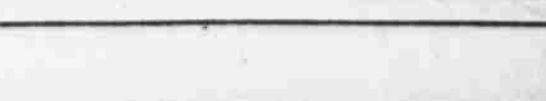
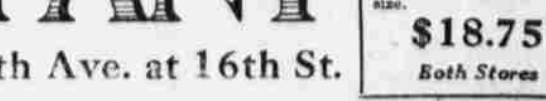
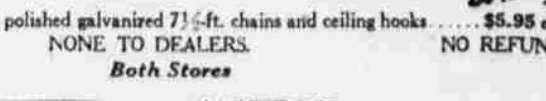
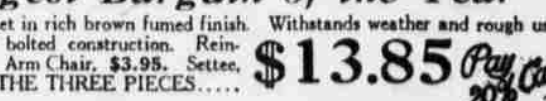


This Suite Exceptionally Underpriced

THREE-PIECE SUITE, in Reed fibre, finished in Blue and Tan Mongol decorated, with loose cushions, removable seats; seats and backs upholstered in floral design cretonne. This suite would be excellent value at double the price.

THE THREE PIECES \$109.25

Both Stores

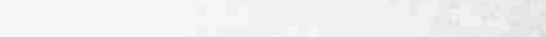
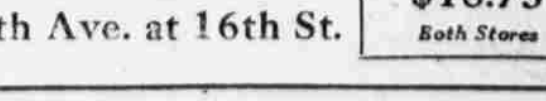
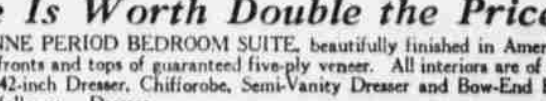
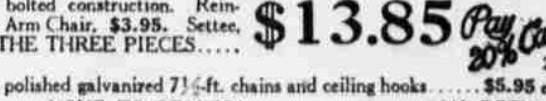


This Suite Is Extra Special Value

THREE-PIECE PERIOD LIVING ROOM SUITE, choice of two patterns, beautifully finished in Antique Brown Mahogany, with cane backs. Upholstered in excellent quality Velour. Settee, Arm Chair and Rocker. Complete with two Sunburst Pillows

\$97.50

Both Stores



GRAND RAPIDS  
FURNITURE

CREDIT TERMS  
\$3.00 Down on \$50  
5.00 " " 75  
7.50 " " 100  
10.00 " " 150  
15.00 " " 200  
25.00 " " 300

100% CASH  
Special This Week Only  
Royal Easy Chair (the best Morris Chair), upholstered in leatherette..... \$19.75

Bed and Spring and Mattress Set..... \$19.75 up  
4-Pc. Bedroom Suite, complete..... \$125 up

Dining Suites in all finishes..... \$150 up  
Dining Table and 4 Chairs..... \$31.50 up

Dressers, Chiffoniers, Tables, Beds, etc.  
EVERYTHING FOR THE HOME.  
OPEN SATURDAY EVENING.  
Near 144th St. "L" Station.  
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